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Gypsy Moth Manual

Introduction

Overview

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Purpose of the Gypsy Moth (GM) Program Manual

APHIS-PPQ (Animal and Plant Health Inspection Service-Plant Protection and Quarantine) is involved in the Gypsy Moth Program for the following reasons:

- ◆ To prevent the artificial spread of gypsy moth to non-infested areas
- ◆ To detect isolated infestations at low population levels
- ◆ To eradicate isolated infestations on State and private lands

NOTICE

See [Appendix A](#) for definitions of terms, such as artificial spread, and for abbreviations, such as APHIS or PPQ.

The *Gypsy Moth Program Manual* is (1) a source of information on the gypsy moth and (2) a reference for methods and procedures for survey, regulatory, and control activities.

Damage Caused by the Gypsy Moth

Gypsy moth is one of the most destructive pests of shade, fruit, and ornamental trees as well as hardwood forests. In the period of 1980 to 1989, the gypsy moth defoliated close to a million or more forested acres each year. (See [Appendix B](#)).

Besides being a pest of trees, gypsy moth larvae are a nuisance to people:

- ◆ When gypsy moth populations are dense, larvae become hyperactive during the day. Heavily infested areas teem with larvae on trees, telephone poles, vehicles, fences, houses, clothes lines, and above ground swimming pools. People avoid going outdoors because of stepping on caterpillars crawling on sidewalks and in play areas.
- ◆ When disease kills the larvae, the dying larvae produce foul odors.
- ◆ Larvae of the gypsy moth excrete digested leaf material while feeding in the tree canopy. For this reason, people will avoid the use of wooded parks and yards during the larval season.

The nuisances caused by the gypsy moth hinder the ability of people to enjoy the outdoors, whether in their yards or at wooded parks.

Background on the Gypsy Moth

Accidentally introduced into the United States in 1869 in Medford, Massachusetts, the pest spread rapidly throughout New England. Within the period of 1869 to 1890, the gypsy moth quickly developed into a serious problem in Massachusetts. The damage caused by gypsy moth was one of the key reasons for which Congress passed the Plant Quarantine Act of 1912.

The State of Massachusetts allotted money for eradication and then cut funding in 1900 when gypsy moth was almost eradicated. Had State funding continued, the gypsy moth problem may have been eradicated within State boundaries.

The gypsy moth is now widely established. See [Appendix C](#)-Map of Generally Infested Area or [Appendix D](#)-Generally Infested Area (county-by-county listing).

Research development and implementation of survey, regulatory, and control programs have made the gypsy moth one of the most studied insects in the field of pest management.

Cooperation in the Gypsy Moth Program

Since the end of the last century, Federal, State, and local government agencies have worked cooperatively to control gypsy moth populations (by containment, suppression, or eradication, alone or in combination). Cooperative programs will continue to be the focus of the U.S. Department of Agriculture (USDA).

Dispersal of the Gypsy Moth

The most effective means of spreading gypsy moth in the last 10 to 15 years has been through the movement of Outdoor Household Articles (OHAs). (Around the turn of the century, wagons were the predominate means for transporting gypsy moth.) Today, 85 percent of new infestations have been through the movement of Outdoor Household Articles.

With the current mobility of our population, the sprawling suburbanization of once forested areas, and the insidious nature of the pest, the job of preventing the establishment of isolated infestations by artificial spread is a difficult one. To contain the gypsy moth, an effective job will require the following: (1) public education on the problem, (2) public support in preventing gypsy moth movement, and (3) early detection and eradication of isolated infestations.

Despite all efforts, the gypsy moth has persisted and continues to extend its range. The gypsy moth is the only forest insect that is under Federal Domestic Quarantine (7CFR 301.45).

Potential Damage from the Gypsy Moth

Potentially, all temperate hardwood growing areas of North America are at risk from attack by the gypsy moth. Despite all attempts to prevent its movement, the gypsy moth has been quite successful in increasing its range along the leading edge of the generally infested area.

Scope of the Gypsy Moth Program Manual

The manual is divided into eight Sections:

1. Introduction Section
2. Survey Section
 - A. Overview
 - B. Detection Survey-Subsection
 - C. Delimiting Survey-Subsection
 - D. Other Survey Tools-Subsection
 - E. Preparing Survey Specimens for Identification-Subsection
3. Regulatory Section
 - A. Overview
 - B. Treatments-Subsection
 - C. Hazardous Sites-Subsection
 - D. Logs, Pulpwood, and Wood Chips-Subsection
 - E. Nursery Stock-Subsection
 - F. Christmas Trees from Canada-Subsection
 - G. Qualified Certified Applicator (QCAs)-Subsection
 - H. Outdoor Household Articles (OHAs)-Subsection
 - I. Mobile Homes and Associated Items-Subsection
4. Control Section
 - A. Overview
 - B. Safety Precautions-Subsection
 - C. Planning for Control-Subsection
 - D. Eradications Using Insecticides-Subsection
 - E. Eradications Using Mass Trapping-Subsection
5. Transition Area Section
6. Asian Gypsy Moth Section
7. Appendixes Section
8. Index Section

Sections

The major divisions of the Gypsy Moth Program Manual are sections. Note that some of the sections are further divided into subsections.

All eight sections are tabbed. If large, the sections have a table of contents. Usually, each large section will contain an “Overview” and other subsections. Methods and procedures will be in the subsections. The “Overview” is a broad, general description of what is covered in the section. The subsections cover the rationale of a particular activity as well as the “how to” (procedures and material) necessary for performing tasks associated with each activity.

Appendixes

The appendixes contain information directly associated with gypsy moth activities. They are placed in the back because they may interfere with the flow of the manual.

The Appendixes are as follows:

- A. **Appendix A—Definitions, Abbreviations, and Terms**
- B. **Appendix B—Forest and Disease Leaflet 162**
- C. **Appendix C—Map of Generally Infested Areas**
- D. **Appendix D—Generally Infested Areas**
- E. **Appendix E—How to Assemble Traps**
- F. **Appendix F—GM Survey Data and NAPIS**
- G. **Appendix G—Compliance Agreements (CAs)**
- H. **Appendix H—Insecticide Labels and MSDSs**
- I. **Appendix I—Methods for Gypsy Moth Eradication**
- J. **Appendix J—Guidelines for Environmental Documents**
- K. **Appendix K—Public Meetings/Public Relations**
- L. **Appendix L—Calibrating Aircraft**
- M. **Appendix M—Nozzles and Pressures**
- N. **Appendix N—Procedures for Composting Bark**
- O. **Appendix O—Accurate Statement**
- P. **Appendix P—Certificate of Origin**
- Q. **Appendix Q—Checklist for OHAs**
- R. **Appendix R—QCA Document**

How to Use This Manual

Look over the lists just given to get a feel for the scope and organization of the manual. Remember that the manual is divided into Sections and then further subdivided into subsections. Glance over the Appendixes to be familiar with their contents.

With a hard-copy manual, access the information about a particular activity by looking behind the appropriate tabs for the table-of-contents for the section (for example, information on the Detection Survey Subsection is behind the Survey Tab).

With an on-line manual, access the information about a particular activity by selecting the hypertext link (the keyword underlined in blue) and double-clicking the mouse button.

Users of the *Gypsy Moth Program Manual*

This manual will serve both as a field manual for employees performing program activities and as a reference for program managers and staff officers. Primary users of this manual will be Plant Protection and Quarantine (PPQ) officers, staff officers, and State and Federal cooperators who are involved in carrying out the Gypsy Moth Program on a day-to-day basis.

Secondary users of the manual are Federal, State, county, local regulatory officials, private industry, and part-time employees temporarily assigned to program activities.

Conventions

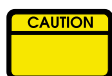
The major conventions used in this manual follow:



This is a DANGER table. Indicates that people can easily be hurt or killed.



This is a WARNING table. Indicates that people could possibly hurt or killed.



This is a CAUTION table. Indicates that people could possibly be endangered and slightly hurt.



This is a NOTICE table. Indicates a possibly dangerous situation, goods might be damaged.



This is an IMPORTANT table. Indicates helpful information.

An example, when used, will appear in a box as follows:

EXAMPLE: Example are graphically placed in boxes within text as a means of visually separating this information from other information contained on the page.

Reporting Problems

To suggest an improvement or identify a problem with the manual, complete and mail the “Comment Sheet” at the back of this manual. If you disagree with the guidelines or policies contained in this manual and the problem is urgent, call Domestic and Emergency Operations at the following address:

Domestic and Emergency Operations, Unit 134
4700 River Road
Riverdale, MD 20737
Tel: (301) 734-8247
Fax: (301) 734-8584

If you disagree with the guidelines or policies and the problem is **not** urgent, contact Domestic and Emergency Operations through channels.

Related Documents

The following documents are related to the Gypsy Moth Program:

- ◆ *Gypsy Moth Suppression and Eradication Projects—Final Environmental Impact Statement as Supplemented - 1985*
- ◆ Environmental Assessments
- ◆ *Appalachian Integrated Pest Management FEIS 1989*
- ◆ Wildlife and Fisheries Regulations (Endangered Species Act)
- ◆ Code of Federal Regulations (7CFR 301.45)

- ◆ *Aerial Application Manual*
- ◆ State memorandums of understanding
- ◆ State laws which allow access to private property
- ◆ National memorandums of understanding
- ◆ “Don't Move Gypsy Moth” (Program Aid 1329)
- ◆ Insecticide Labels and Labelling
- ◆ Material Safety Data Sheets (MSDSs)
- ◆ Gypsy Moth Proposal: Redirection of the Gypsy Moth Program and Attachment A—National Survey Plan for Gypsy Moth
- ◆ *APHIS Safety and Health Manual No. 203*, dated May 27, 1983
- ◆ USDA Departmental Regulation No. 4400-1, Departmental Occupational Safety and Health Management, dated January 6, 1983



Under Animal and Plant Health Inspection Service (APHIS) policy, only certified pest control operators may use or supervise the application of insecticides used in regulatory and control activities.

- ◆ USDA Hazard Communication, A Guide for Federal Agencies, August 1987
- ◆ USDA Departmental Regulation No. 4400-2, Hazard Communication Programs, dated October 14, 1986
- ◆ USDA Departmental Regulation No. 5023-1, Chemical Hazard Communication, dated October 10, 1986

Preventative Safety Measures

Safety measures involving personnel, the public, and the use of equipment are the responsibility of all persons working on the Gypsy Moth Program. Supervisors must advise employees of safety and health regulations and notify employees of known hazardous conditions. Employees must comply with all safety and health regulations. When necessary, wear protective equipment and report hazardous situations to your supervisor. Contact your supervisor immediately when an accident or personal injury has occurred.

Safety Reminders When Trapping

- ◆ Beware of aggressive animals (for example, dogs, bulls, etc.) near the trap site.

- ◆ If trapping in an area where Lyme disease is common, wear protective clothing against deer ticks. Inspect yourself and clothing after servicing trap in a deer tick area. Preventative measures are the usual way of avoiding Lyme disease. Contact your local public health officials for other preventative measure to take.
- ◆ Avoid contact with poisonous plants.
- ◆ Carry plenty of drinking water.
- ◆ Wear proper clothing (long pants, sturdy shoes or boots).
- ◆ In areas with poisonous snakes, wear snake leggings and carry a snake bite kit.
- ◆ Use gates for entering properties, watch for electric fences!
- ◆ Respect resident's property.

Vehicle Safety Reminders

- ◆ Check the condition of the vehicle before starting daily activities.
- ◆ Check to see that passage is clear before backing up the vehicle.
- ◆ Select a safe parking place for the vehicle while servicing traps or when leaving the vehicle.
- ◆ Drive slowly when roads are unfamiliar, winding, narrow, or unpaved.
- ◆ Always use your seat belts.
- ◆ Obey the posted speed limits. DON'T SPEED!
- ◆ Keep your vehicle free of debris and unsecured items.
- ◆ Tell your supervisor immediately whenever you're involved in an accident.
- ◆ Carry wooden blocks to block your tires when parking on a steep slope.
- ◆ Carry sufficient repair tools (jack and lug wrench) and safety equipment (flares and first aid kit).

